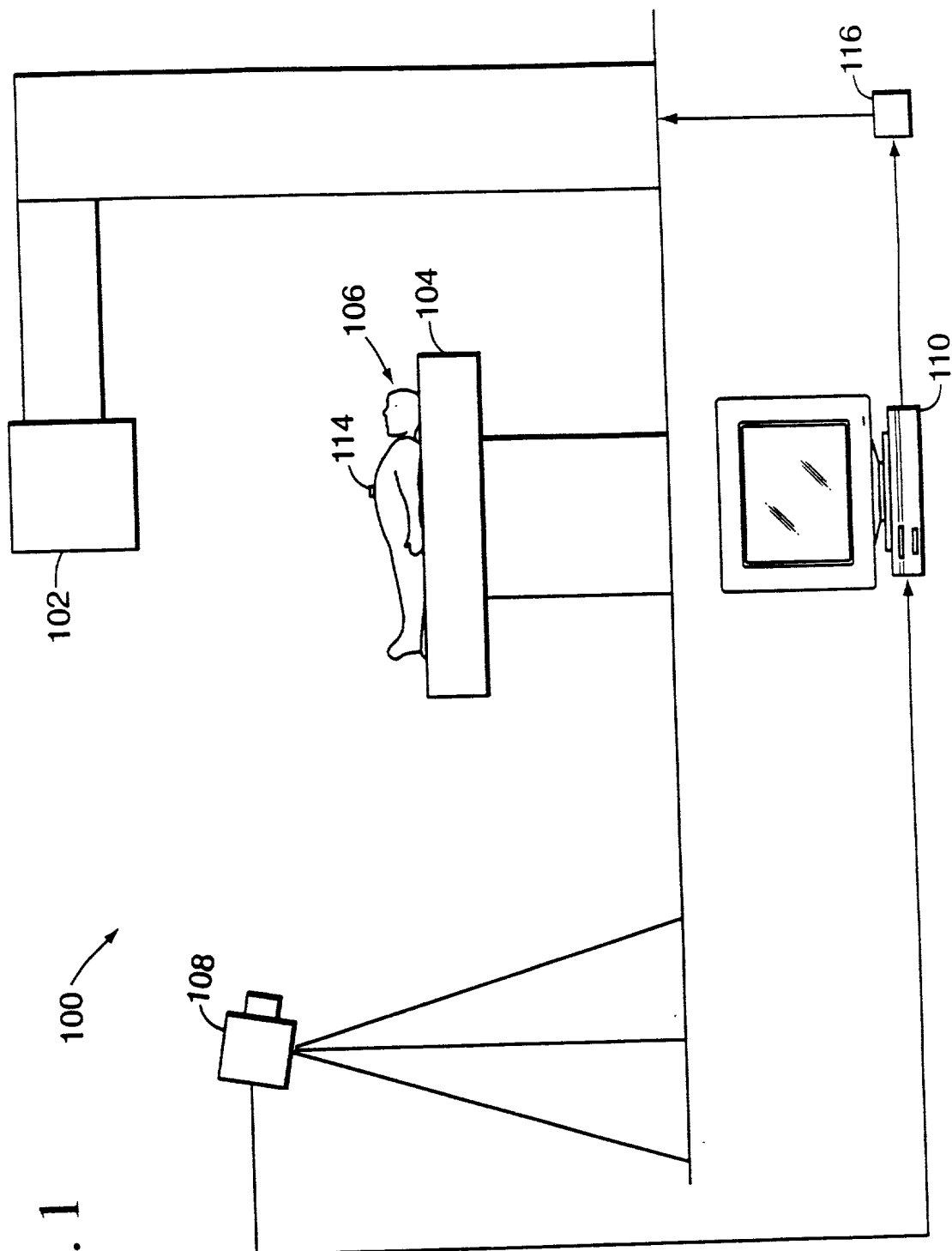


FIG. 1



T03430" 24T 25863

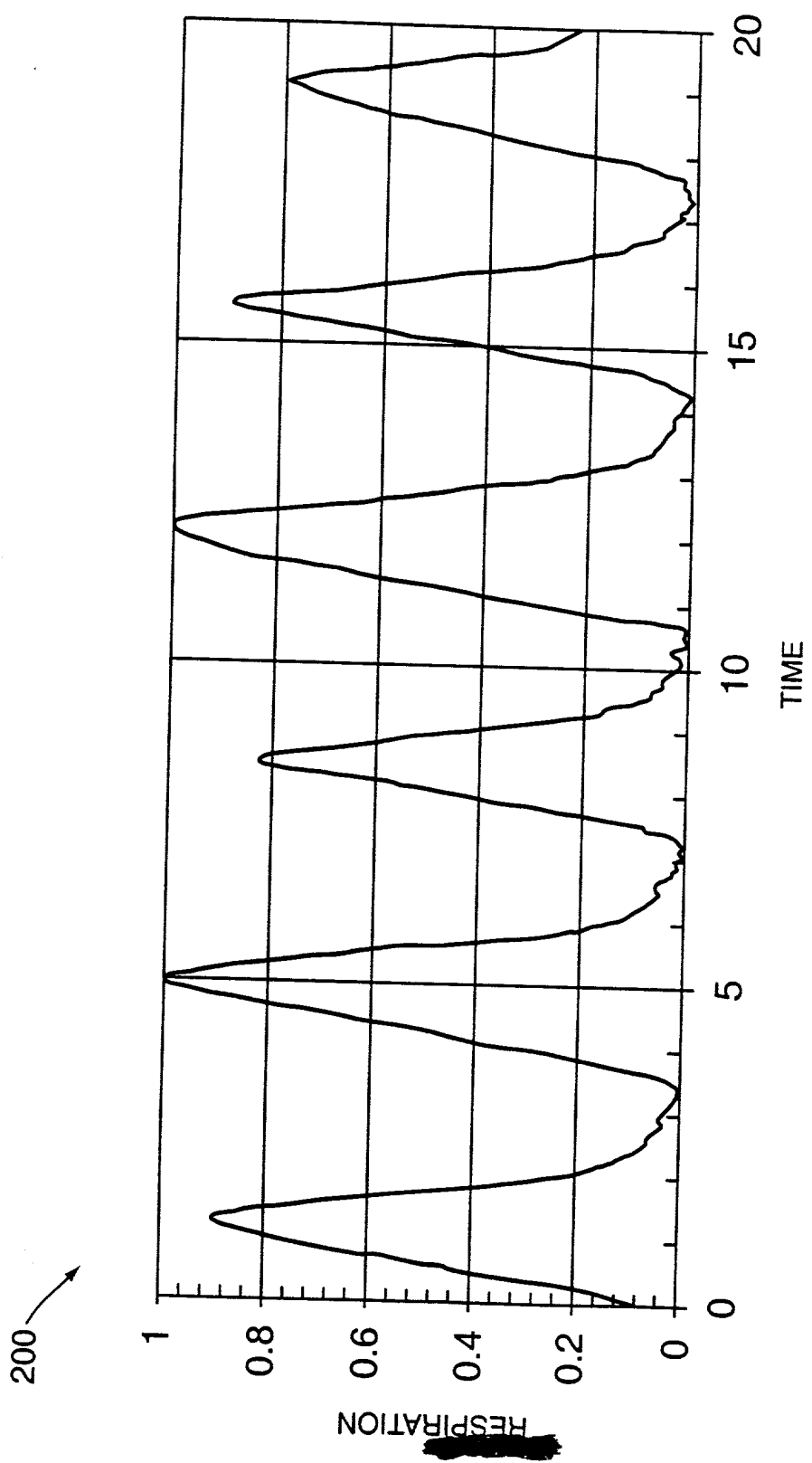


FIG. 2

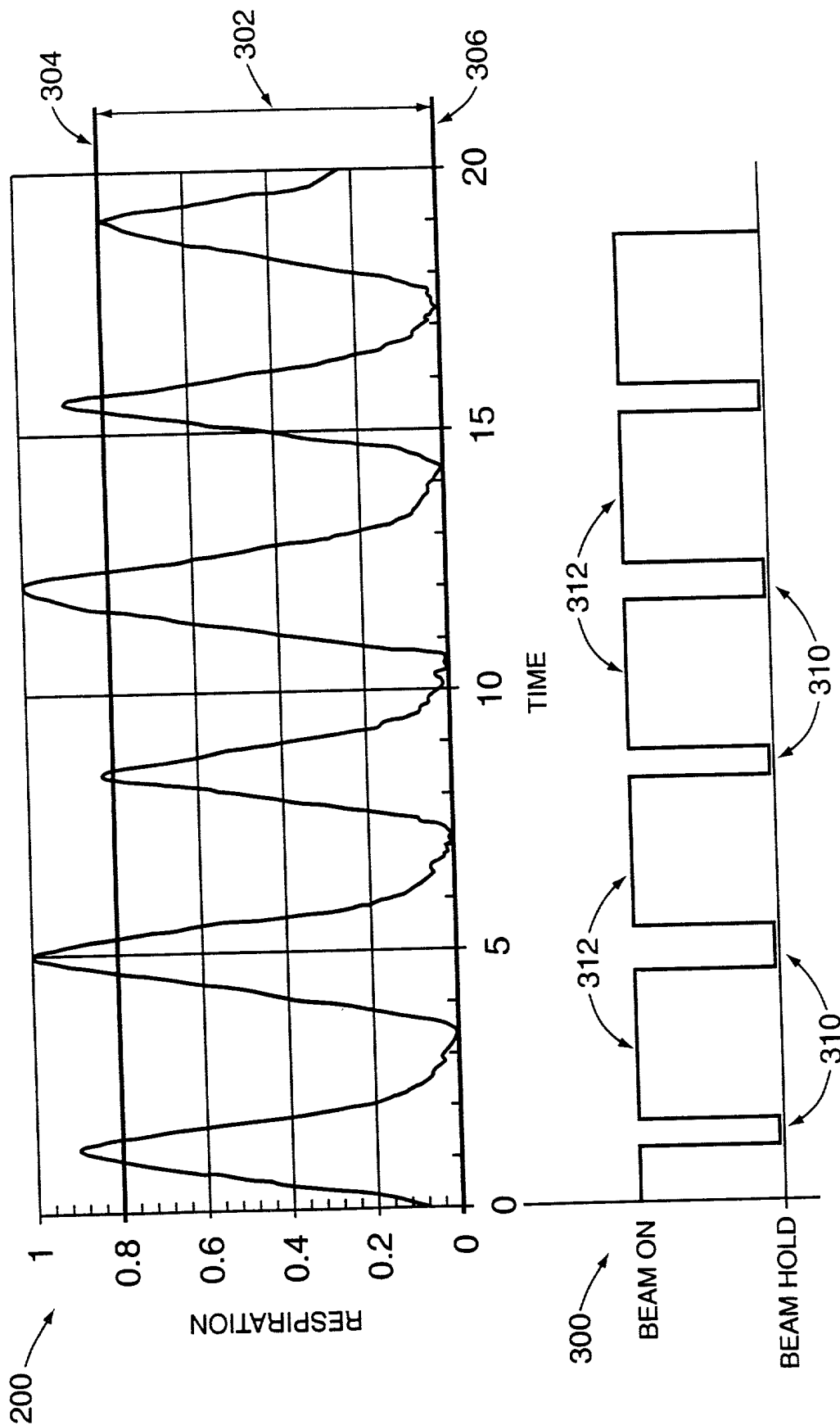


FIG. 3

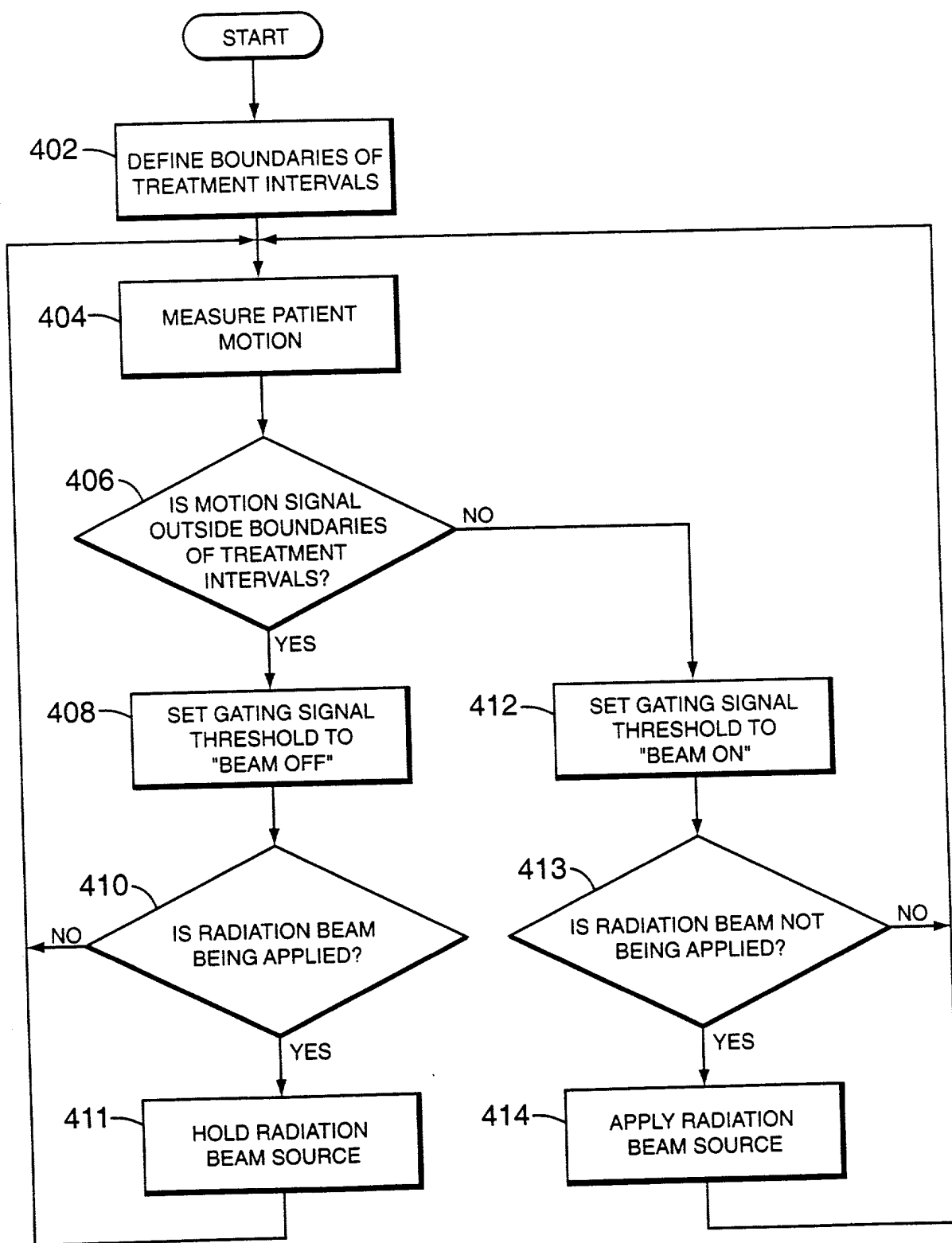
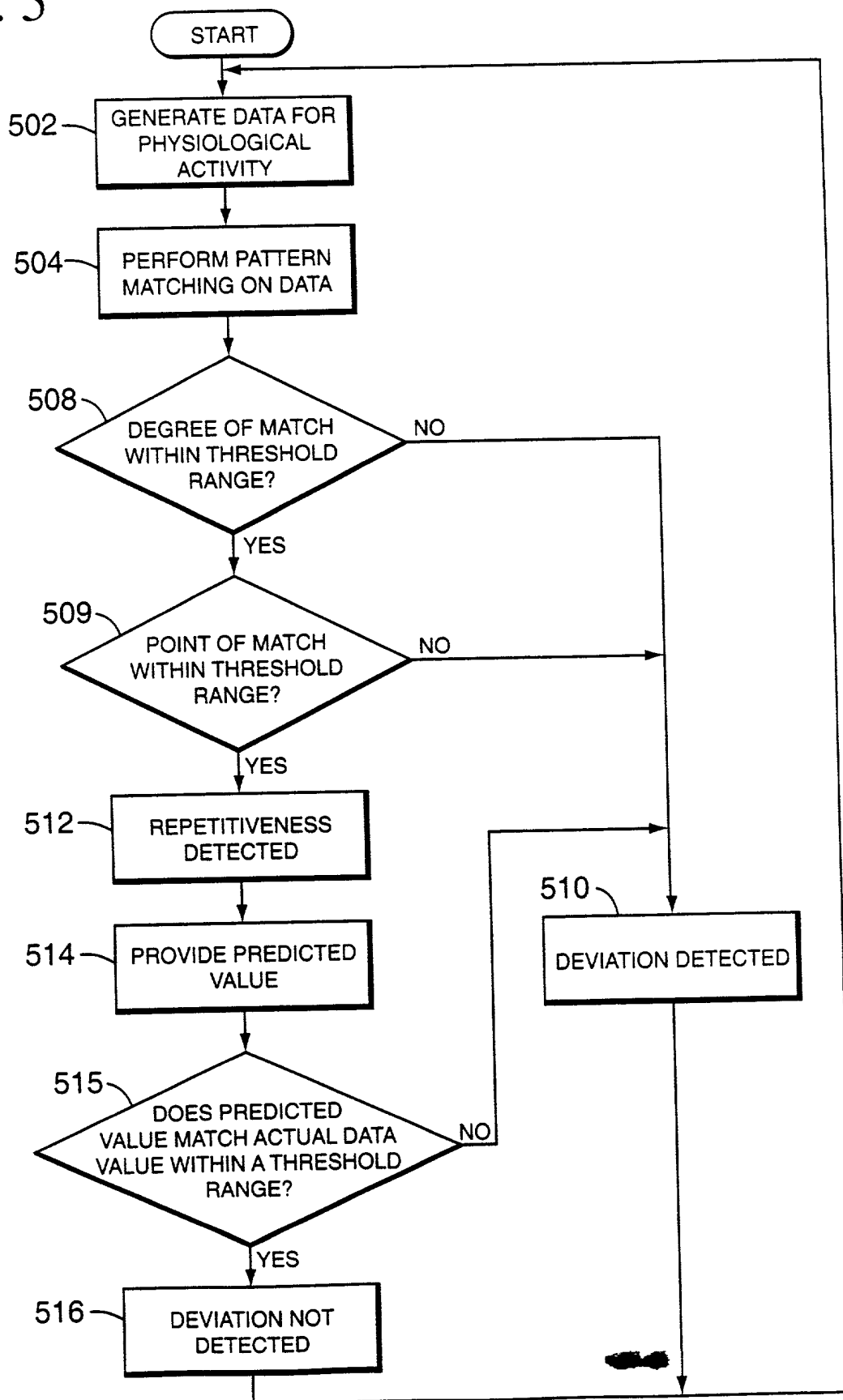


FIG. 4

FIG. 5



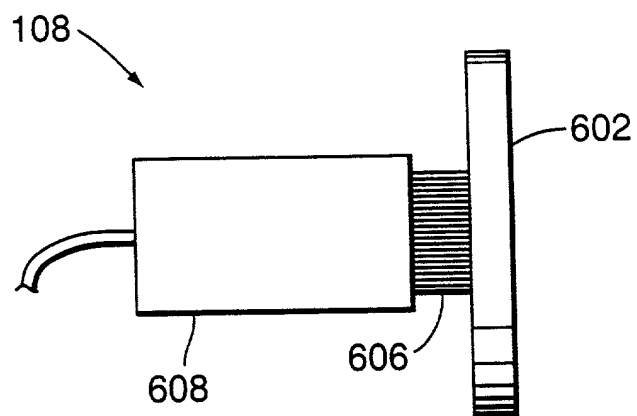


FIG. 6a

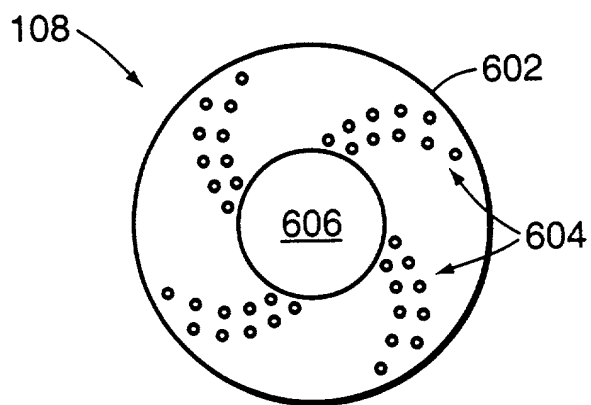


FIG. 6b

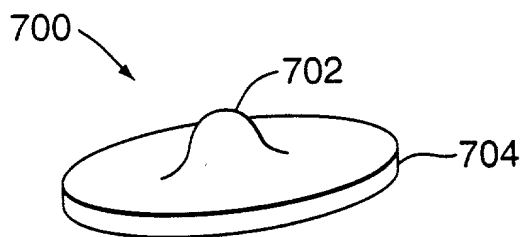


FIG. 7a

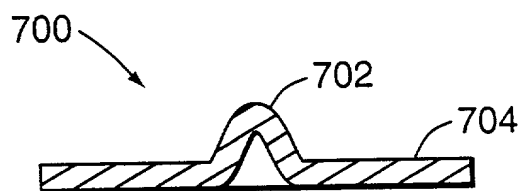


FIG. 7b

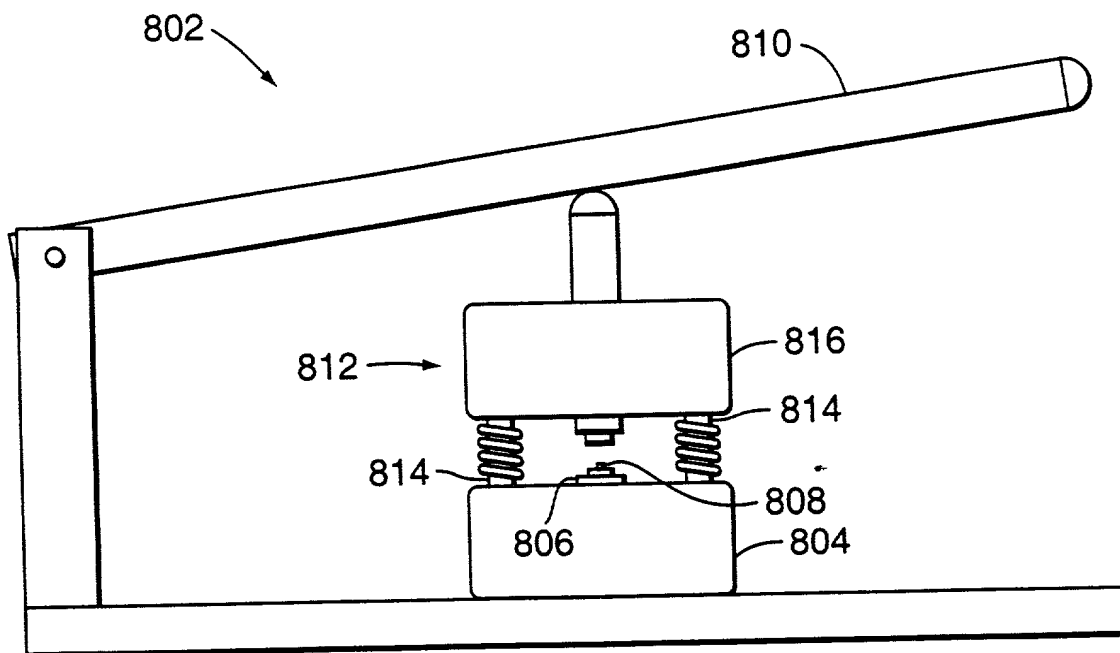
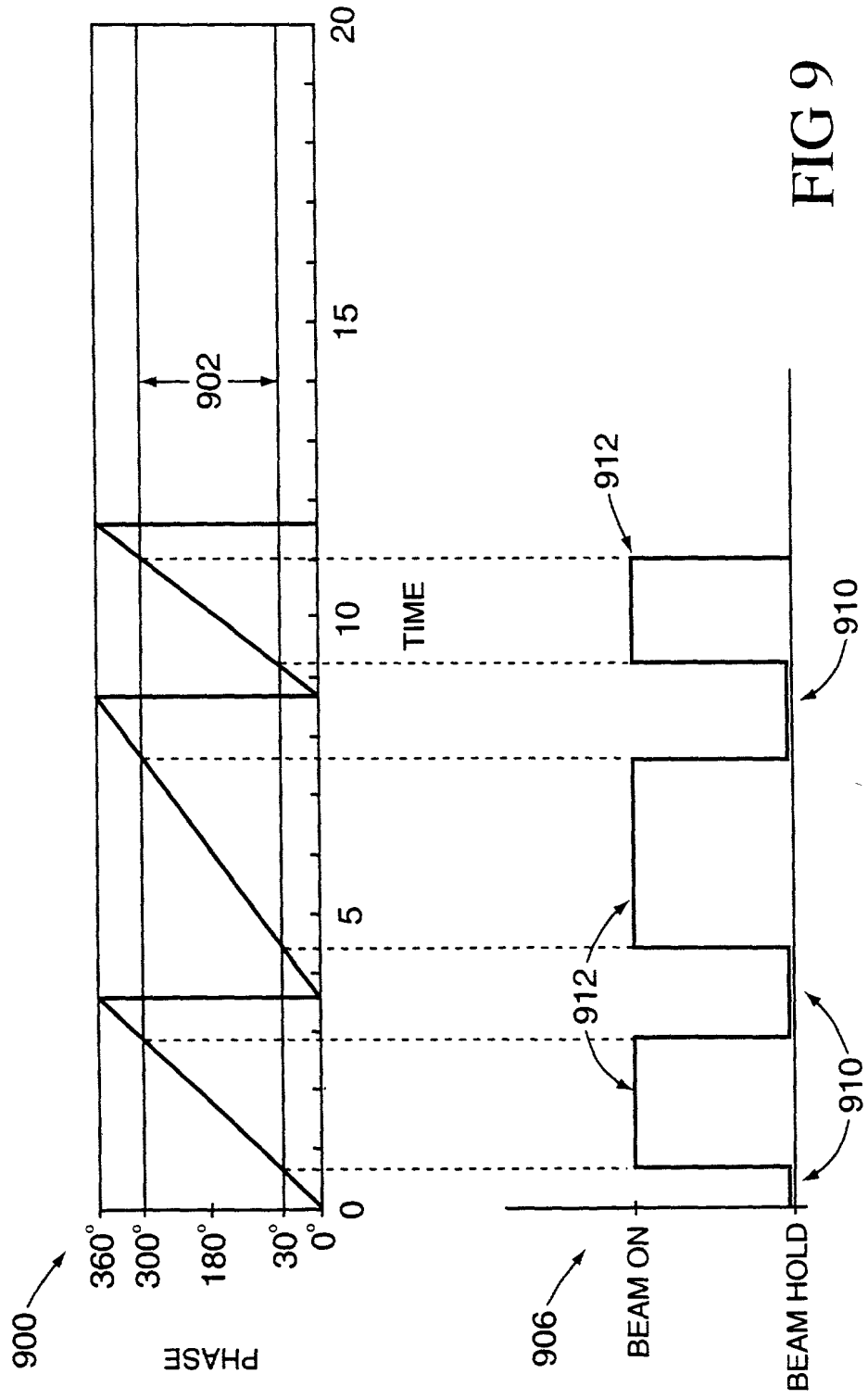


FIG. 8



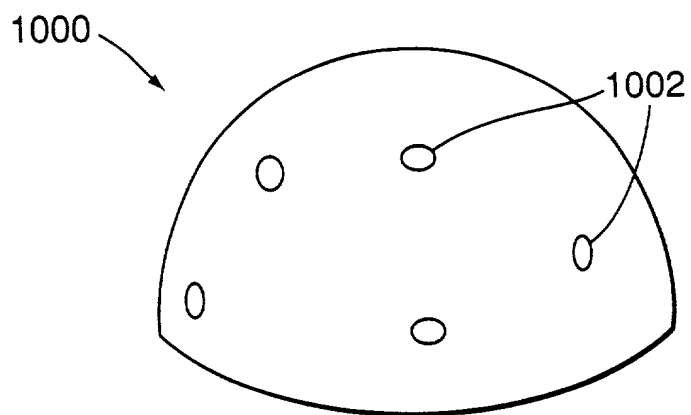


FIG. 10

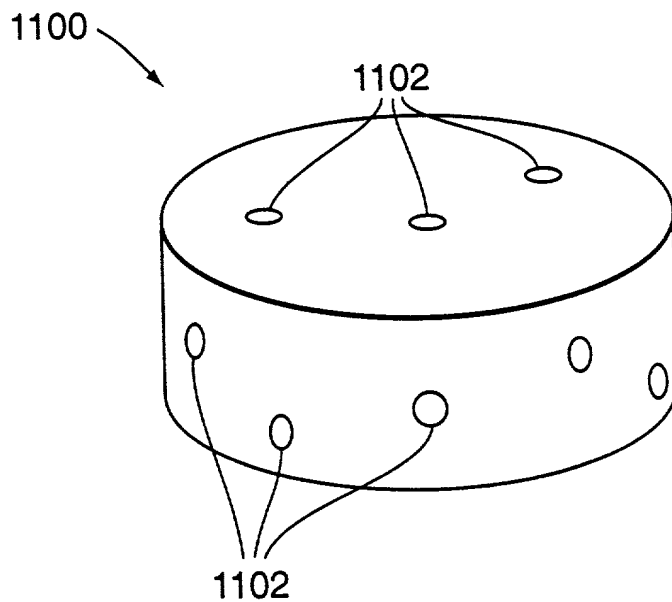
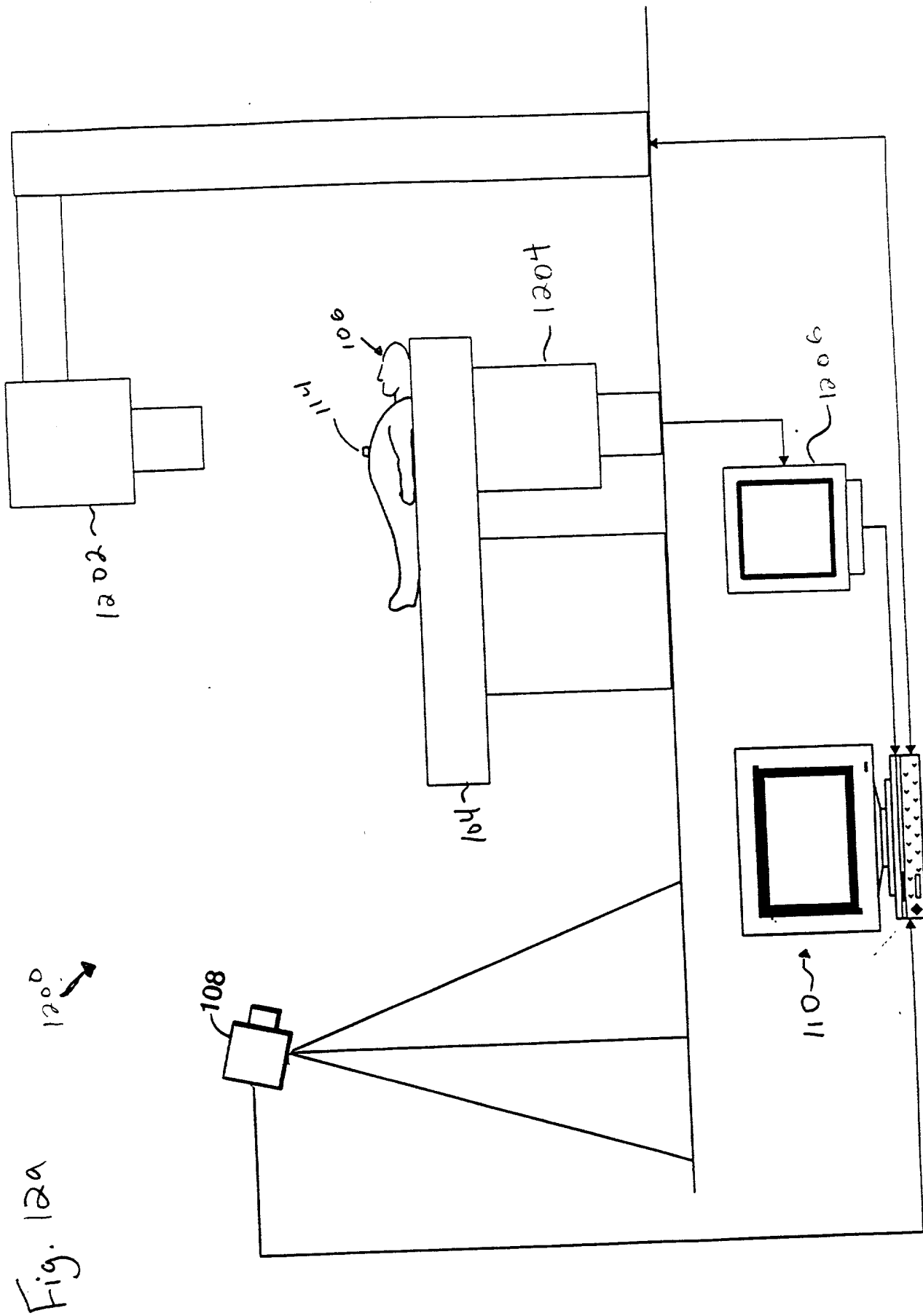


FIG. 11



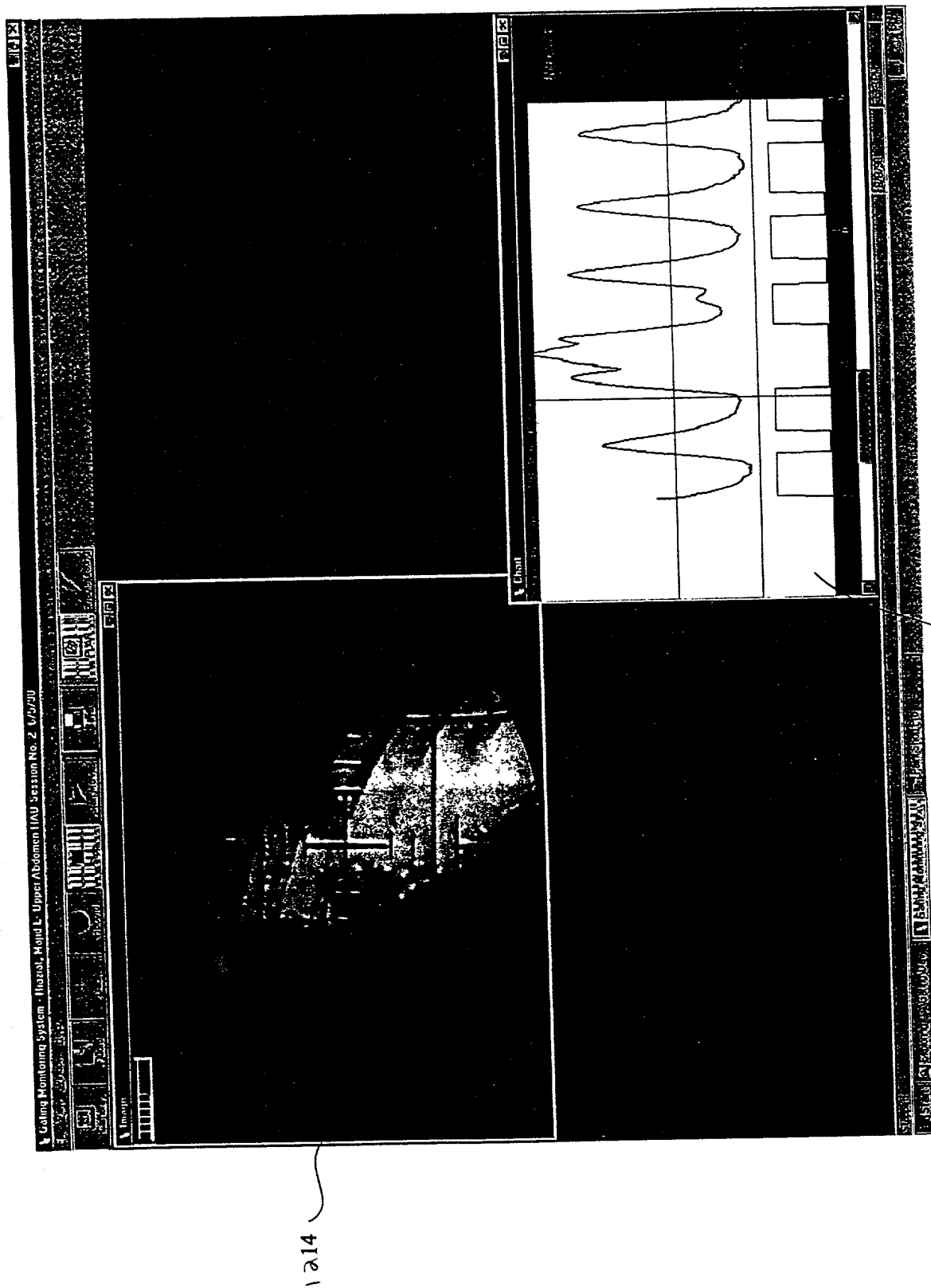


Fig. 12b

start

1302 ~ Receive data sample

1304 ~ Estimate exhale period,
inhale period, and
overall period

1306 ~ Estimate phase value
of data sample

1308 ~ compare current data
sample with prior
data sample(s) at
equivalent phase

1310 ~ Current
Data Sample
within threshold
?

1312 ~ Deviation
Detected

1314 ~ Deviation not
detected

Fig. 13a

109290" 247E6860

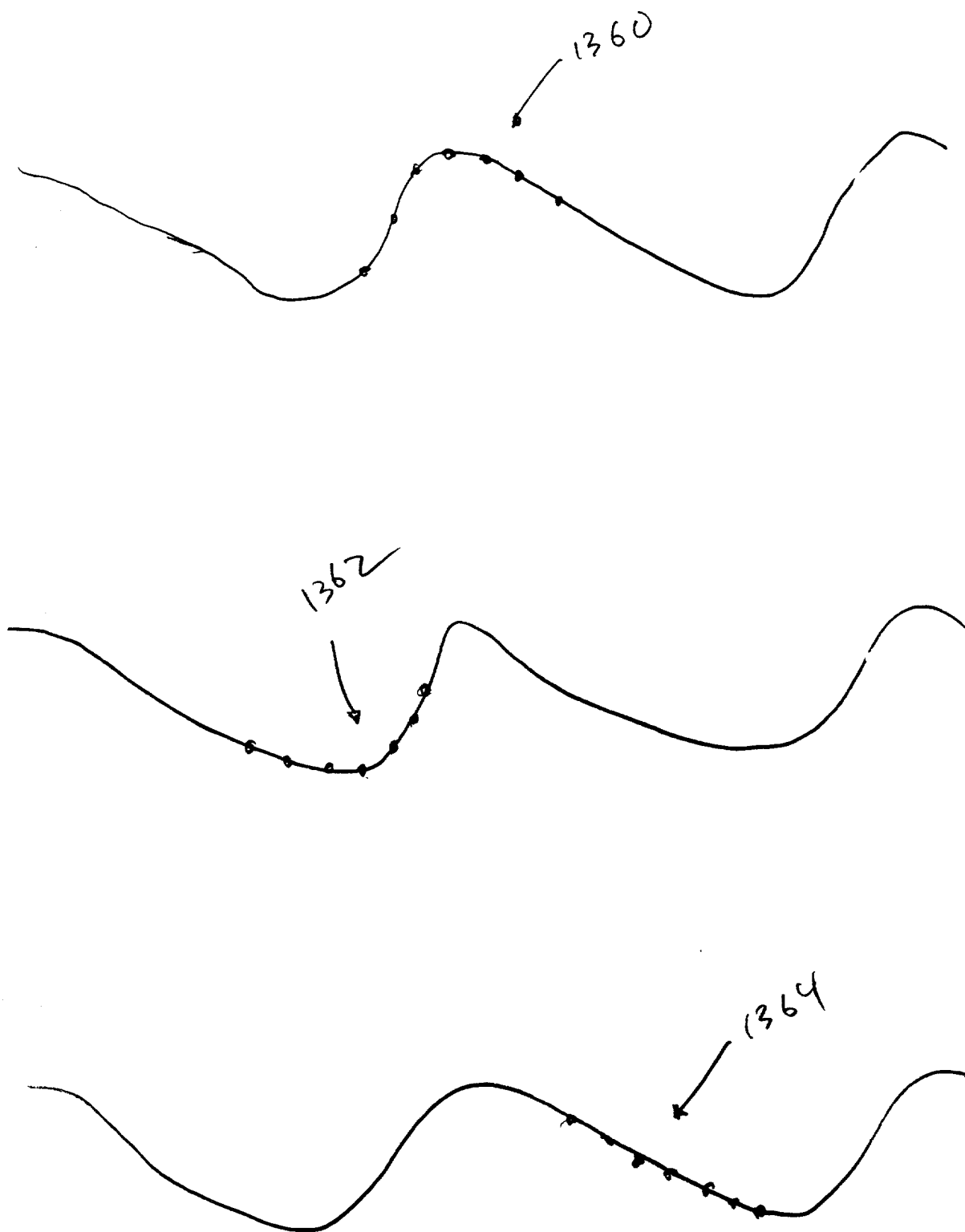
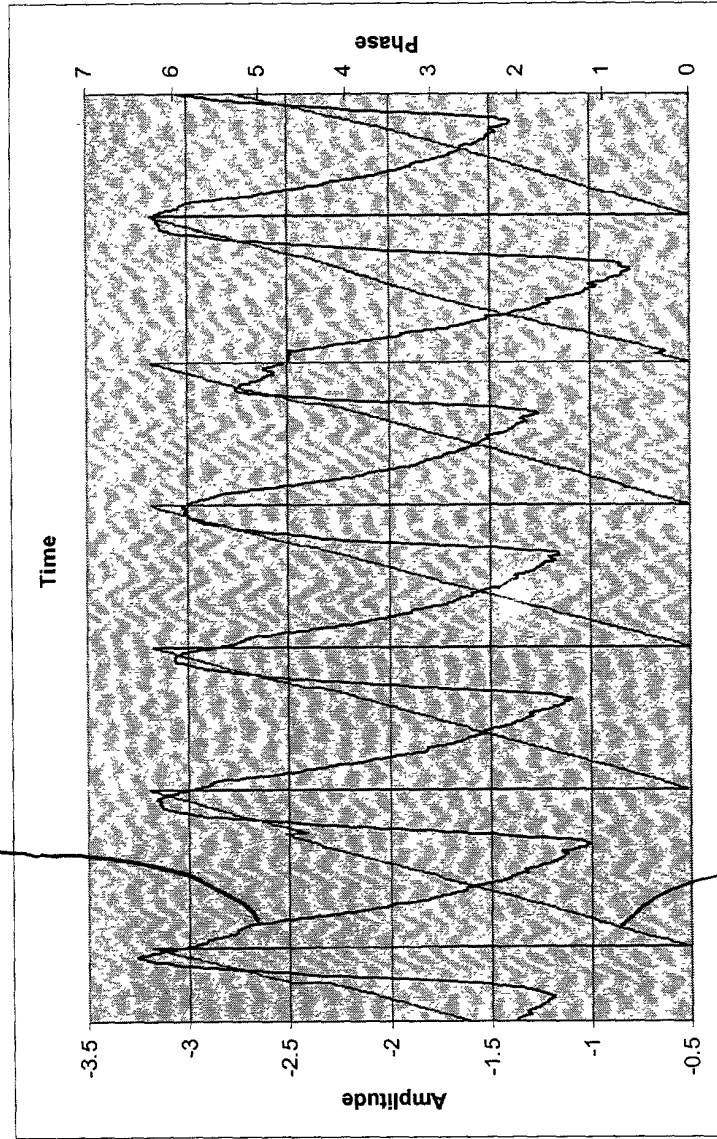


Fig. 13b

FIG. 13C

1352



1350

Fig. 13C

1360

1364

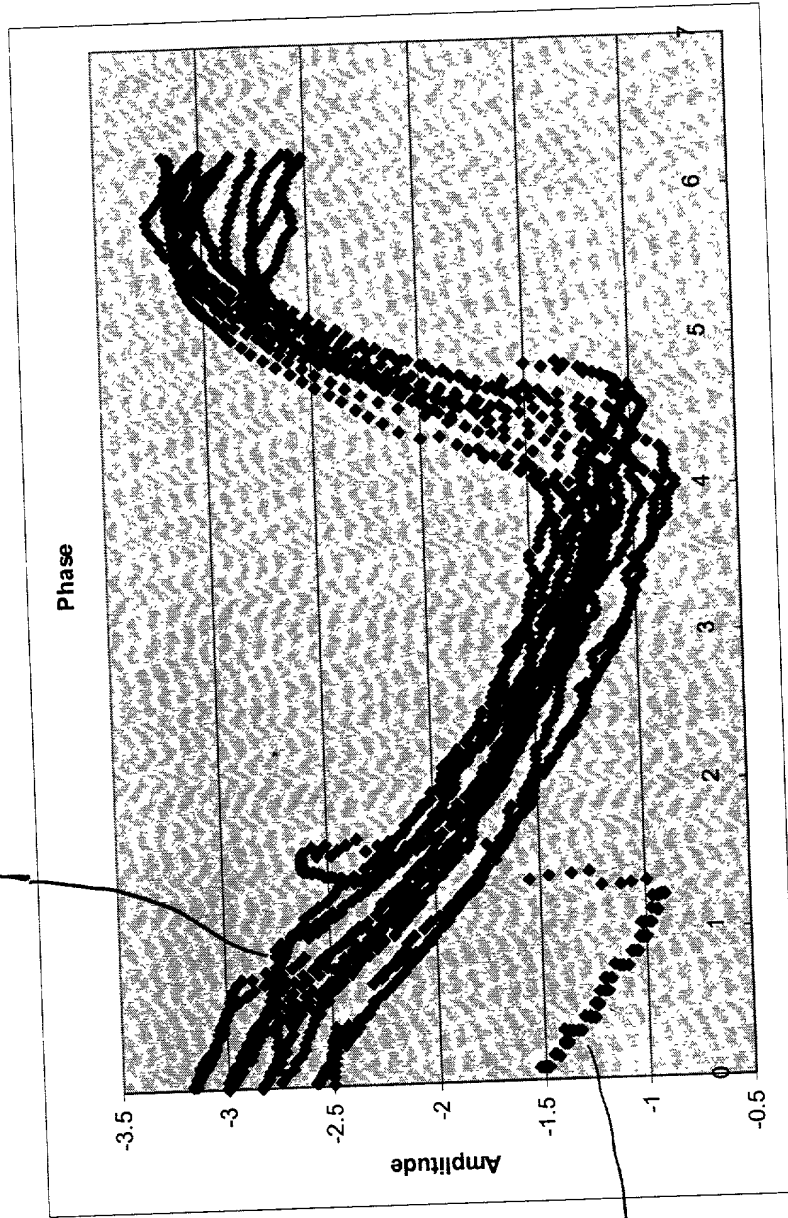
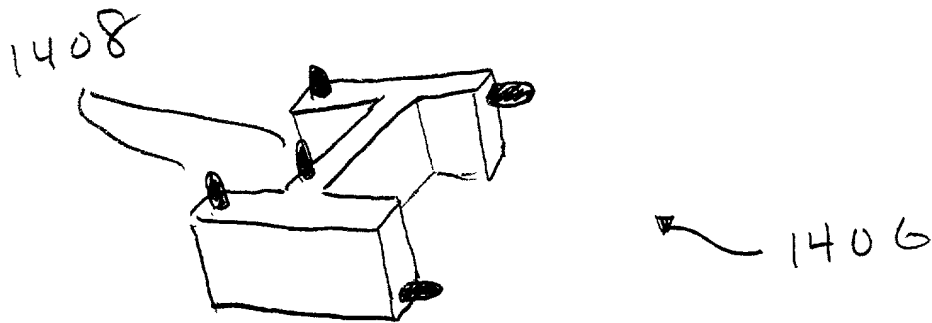
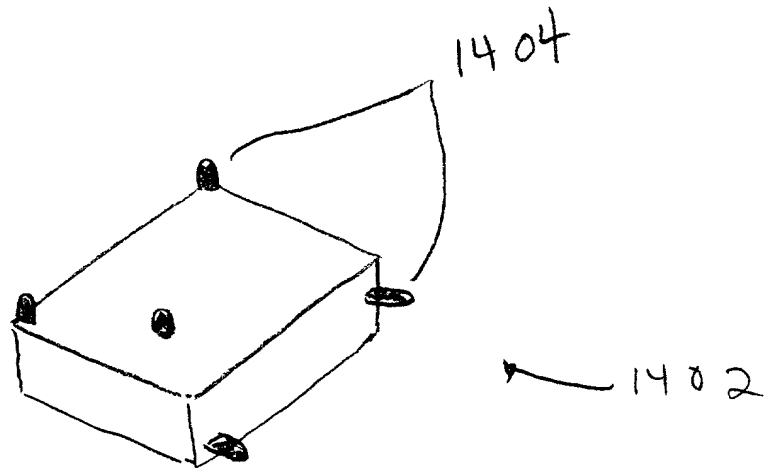
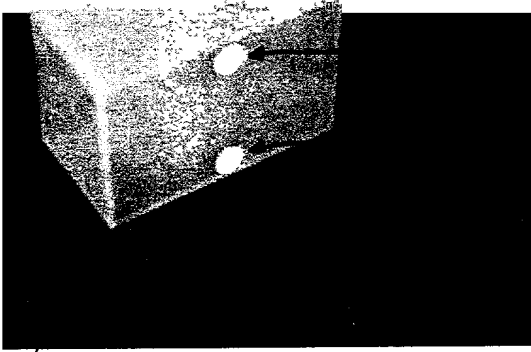


Fig. 13d



1477



1473

1475

1471

Fig. 14c

start

1502 ~ obtain reference data for markers on marker block

1504 - Obtain reference data for position monitoring system

1506 - Receive new Frame

1508 Estimate marker positions and orientations

```
graph TD; 1508[Estimate] --> 1509[Estimate pixel coordinates];
```

1510 Detect markers in image frame

1512- Compare estimated marker positions with actual positions

1514 → Estimated positions and orientations w/in threshold

1516
Generate new
estimate of
marker positions
and orientations

Fig. 15

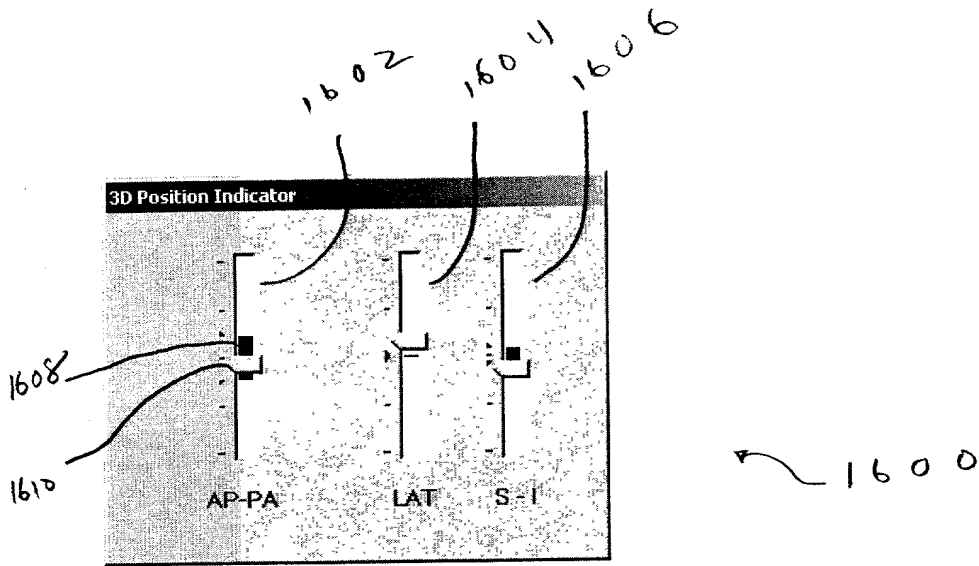


Fig. 16

[illegible]

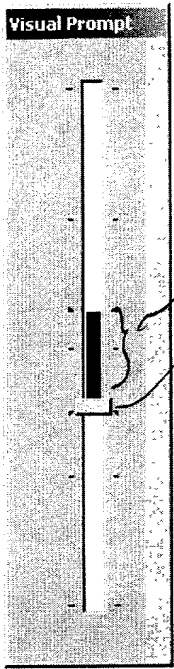


Fig. 17

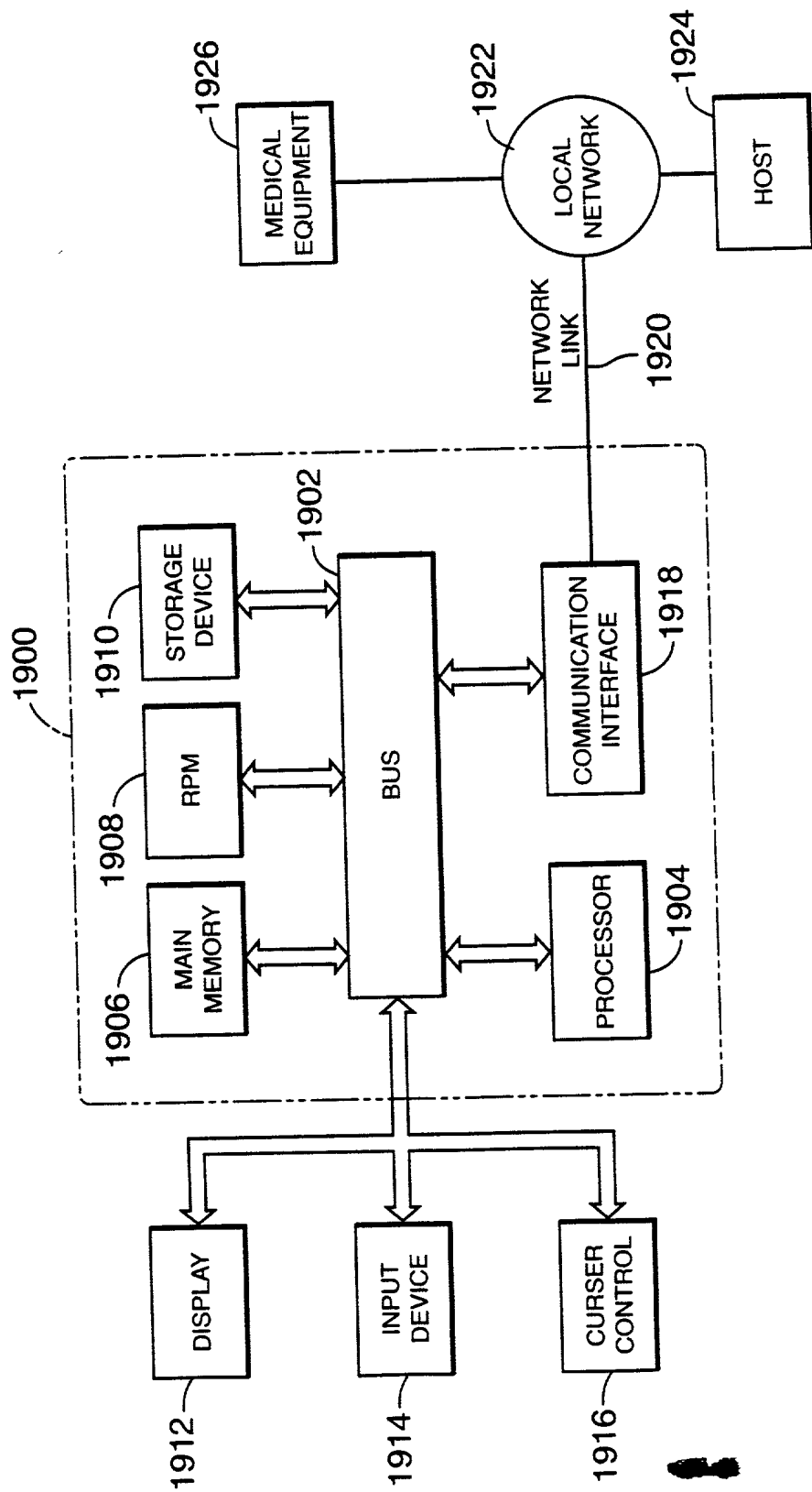


FIG. 19

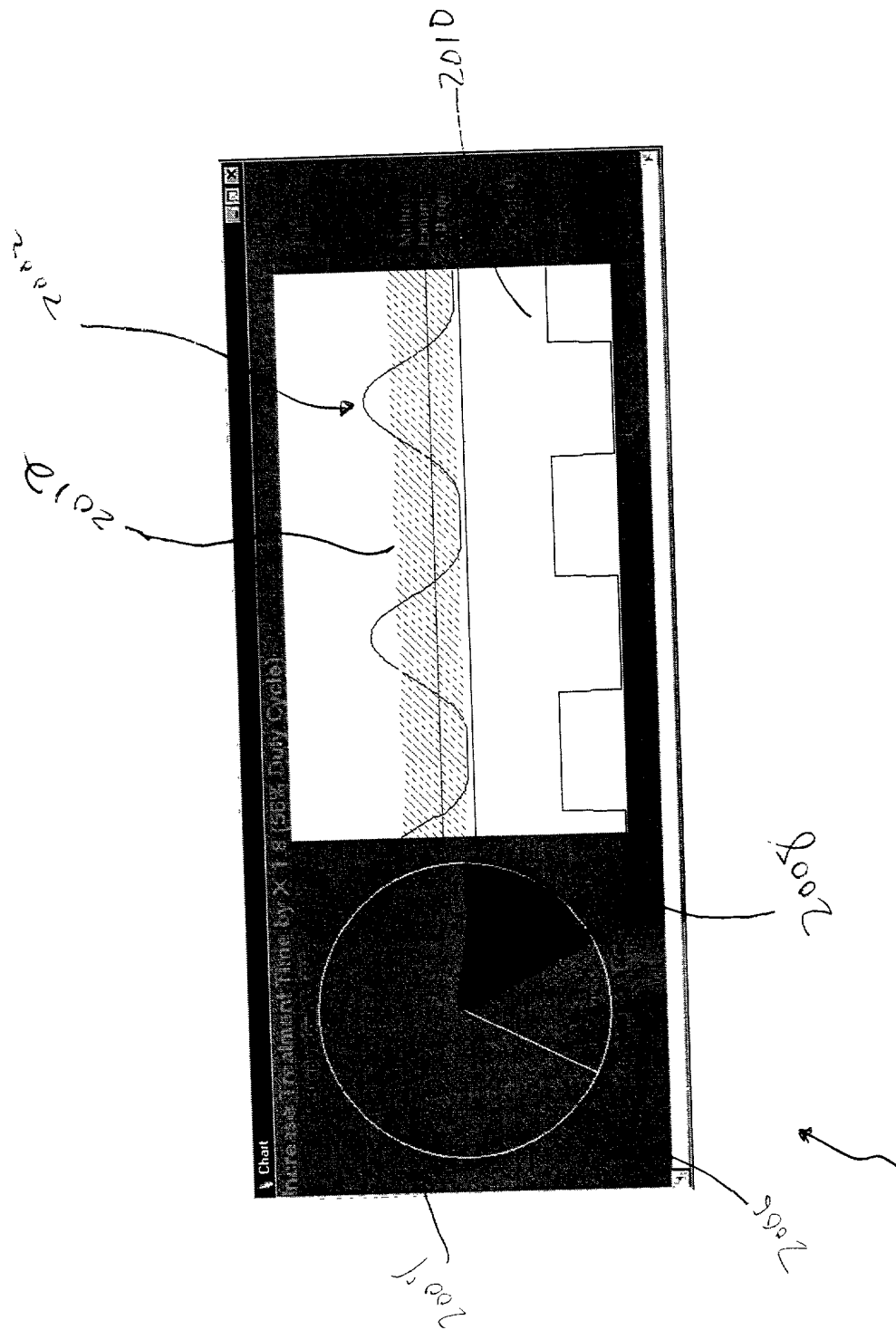


Fig. 20

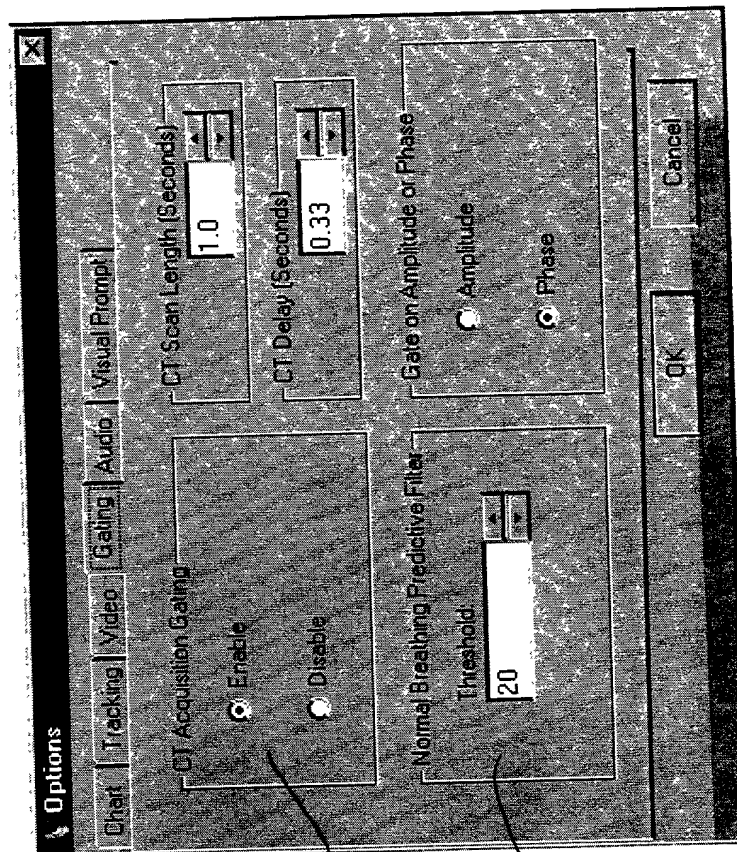


Fig. 21

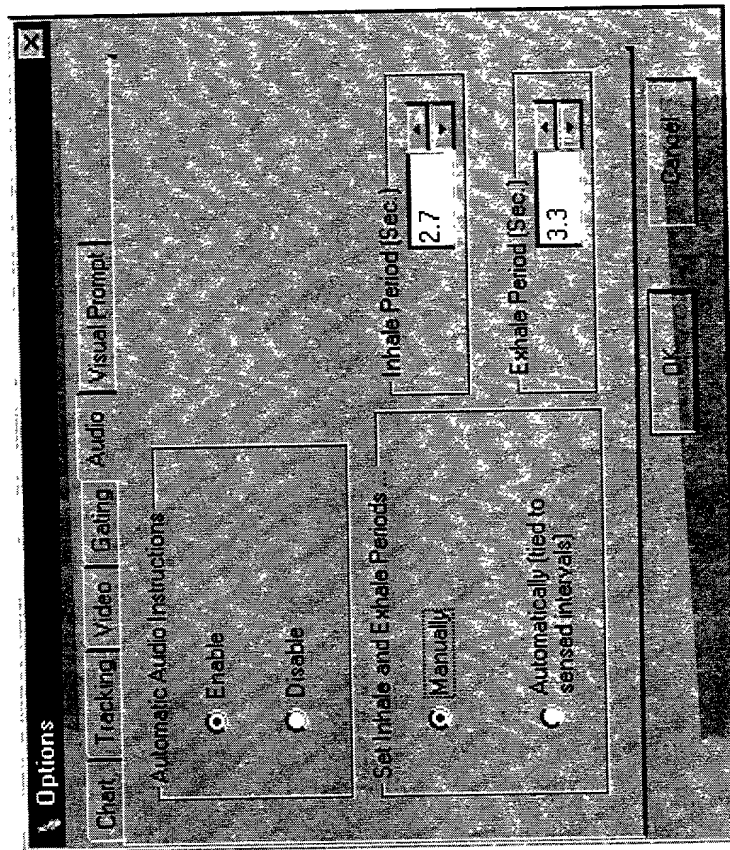


Fig. 22

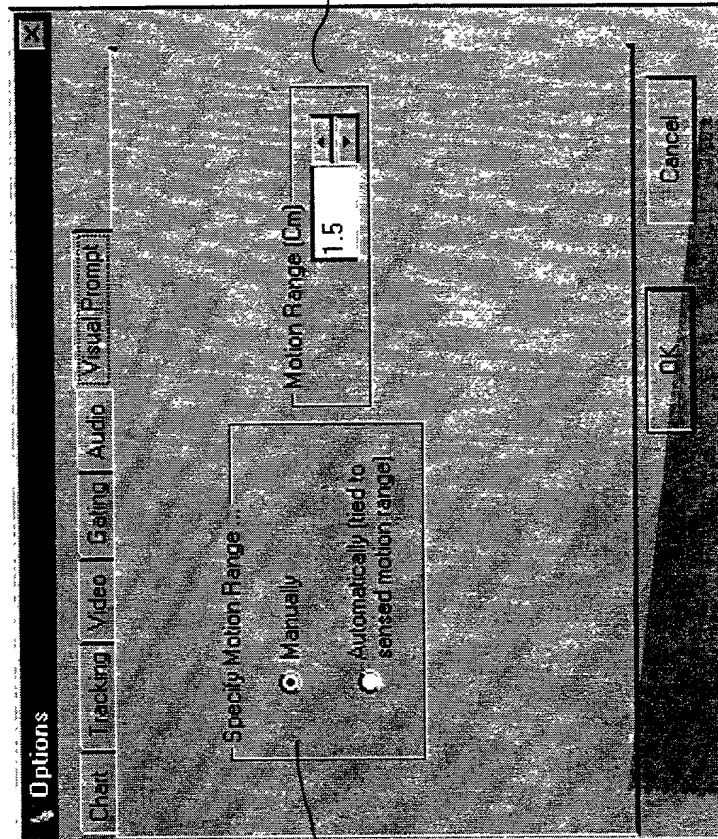


Fig. 23

Camera

Fluoro

Track

Record

Stop

Play Back

Save

Stop Gating

Enable Gating

